1: Conzemius M-4, 5 (1921) 1932
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227 fish on that spot; the presence of the latter is indicated to him from certain movements on the surface of the water. Lead balls or small round pebbles are attached to the edges of the net in order to keep it down in the water.

226 BOW AND ARROW.—Several river fishes, especially the short, deep, bluish-purple, perchlike species, which is known locally by the Miskito name *tuba* (S.: *pahwa*, *pahawa*, *pâu*), are generally killed with bow and arrow. (See Hunting and Fighting Implements.) Two allied fishes, the moga (M. and S.: *moḃa*) and the guapote (M.: *sahsiñ;* S.: *musa*), are also killed in this manner.

The fishermen will sit entire hours at the waterside, keeping up continually a low, plaintive whistling, which is said to entice the fish within arrow shot. This requires great patience, a quality of which the Indian is not lacking, especially when it comes to hunting and fishing. The point of the arrow is held sometimes a foot deep in the water. At the approach of a fish the arrow goes off quick as lightning, and it rarely misses the mark. On account of its feather-light shaft it returns again to the surface and the fish is easily seized. This exercise is extremely difficult, as the true position of the fish is not the one in which it appears to sight, but it varies with the distance of the fish, with the latter's depth in the water, and upon the reflection of the light. In case the fisherman misses the arrow will return to the surface with the same degree as it had been shot down.

FISH "POISONING."—Fish are also caught by "poisoning" the water of small creeks. For this purpose the Indians utilize several vines, [278] especially *Seriania inebrians* (M.: *basala;* T., P.: *wana;* U.: *wahnari*); in Central America all of these varieties are known by the Quichua name "barbasco" or the Aztec "amol" (amolli). The vine is crushed with flat stones or wooden clubs, in order to release the poisonous milky juice. At a narrow part the creek has been barred by a sort of weir or fence made of sticks, stones, or branches in the form of an angle with the point in the middle of the stream. At some distance above this spot the crushed plant is thrown in the water, and the poisonous juice will spread and stupefy all the fish in the neighborhood. The latter then float on the surface and are carried down the stream, but they are intercepted by the weir, where they are caught by the Indians standing in the water and thrown on land. Larger fishes, which are not entirely powerless, are easily harpooned in this condition. By this method enormous quantities of fish may be obtained in a short time. The smaller fishes are allowed to float away and recover in the unadulterated water below. The juice of the "barbasco" is also poisonous to man, but it does not affect the taste of fish killed or stupefied with it. This manner of fishing is widespread in both Americas.

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kept in the hut for that purpose. When the Indians catch the palometa fish (M. and S.: *triau*), they return to the water with the bones and throw them in the same spot, believing that by so doing they will always be favored with good luck when fishing for palometa. In case a woman *enciente* eats this fish, however, it will not bite any more during that season.

HUNTING AND FIGHTING IMPLEMENTS

Weapons naturally play a great rôle among primitive people, for they are used to defend themselves against the wild animals of the forest as well as against their own kind, which is even more dangerous than the beasts of the jungle. Nowadays they are not used any longer in warfare, for the various tribes are at peace, but they still furnish the Indians with the means of procuring a large share of their food supply.

DEFENSIVE WEAPONS.—Defensive weapons have gone out of existence since intertribal wars have ceased, but in former days the Miskito employed round shields (*kabaika*) of light wood or of tapir hide. Armors of plaited reed are also reported; they were covered with jaguar skin and ornamented with feathers. The northern Miskito used a breastplate of twisted cotton like that of the Mexicans (Bancroft: I, 723).

BLOWGUN.—The blowpipe or blowgun is said to be still found among the Ulwa of Rio Escondido, but the present writer was unable to obtain any details pertaining to that arm. Lehmann (c: I, 503), however, gives the name *makar* (compare Bribri *mákol*) for the blowgun among the Ulwa of Rio Murra, a northern affluent of Rio Escondido. According to Bell (b: 232) the Indian children had little blowguns to blow little balls of black wax through, in order to kill wasps, butterflies, and small house lizards. They were made from a reed, called *brasirpi*, the joints of which are about 1½ feet in length.

The use of the blowgun as a hunting and fighting implement would necessarily point to an acquaintance with arrow poison. In fact, Benito Garret y Arlovi in a report from the year 1711 (Peralta, b: 59) states that some of the Miskito used arrow poison. Bancroft (I, 722–723) says that these Indians employed the juice of the manchineel tree (*Hippomane mancinella* L.) to poison arrows and darts, but he fails to indicate the source of his information. It is well known that the Chocó and Tule (Cuna, San Blas) Indians of Panama, like the Caribs of the Lesser Antilles, poisoned their arrows in former days by dipping them in the milky juice of that tree. I have not seen the tree in question on the Mosquito Coast, nor learned its native name; Ziock (69, 237), however, calls it *liwakumya* in the Miskito

1: Conzemius M-4, 5 (1921) 1932
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411 language, and gives this name also as that of an island among the
●278 Mosquito Keys.

The secretions from an indigenous pale greenish-blue frog (*Dendrobates tinctorius*) may also have been used as an arrow poison, as
171 is done by several tribes of Colombia.

411 LANCES AND SPEARS.—Lances and spears, tipped with fishbones or with flint, were formerly used for hunting and fighting, but to-day they are employed exclusively in fishing. (See Fishing and Fishing Implements.) Ferdinand Columbus mentions these weapons and says that they were made of palm wood, black as coal and hard as horn, and pointed with the bones of fishes. The javelin or throwing spear is evidently the weapon mentioned in old Spanish documents under the name of "vara para tirar." According to Exquemelin (Engl. edit.: 114) lances of a fathom and a half in length and tipped with a crocodile tooth were one of the principal arms of the aborigines of the Corn Islands.

SLINGS.—Small slings (M.: *prâuprâukya*) for throwing stones are sometimes employed to kill birds.

CLUBS.—Wooden clubs (M.: *dyara prukaya;* T.: *di bâunin;* U.: *dibâunaka*) jagged with alligator teeth constituted a dangerous weapon in former days, but they disappeared many years ago.

BOW AND ARROW.—Bow and arrow appear to have been the principal weapon of the tribes under consideration; still they are said to have been unknown to the natives of the Corn Islands, who apparently belonged to the Kukra, a subtribe of the Sumu (Exquemelin, Engl. edit.: 114). It is known, however, that the Kukra living on the shores of Bluefields Lagoon possessed arrows, and a description thereof has been left to us by the same author, Exquemelin, whose vessel anchored at that lagoon in 1671. One morning several women slaves from this buccaneer vessel were attacked by a group of Indians and pierced by a great number of arrows. The latter were made of palm wood, 8 feet in length (5 to 6 feet according to the French edition), round in section and of the thickness of a thumb. They were tipped with sharp points of flint which were tied firmly into the arrow together with a wooden hook, so that the arrow point presented a harpoonlike appearance; the other extremity ended in a point. Other arrows had at the distal end a small wooden box, 1 foot long, filled with round pebbles, evidently in order to increase the power of the arrow. The Indians had been careful enough to put some leaves in this box in order to reduce the noise produced by the pebbles upon shooting the arrow off. Some of these arrows were painted red (Exquemelin, Engl. edit.: 247–248; Span. edit.: 446; French edit.: II, 257–258).

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last epidemic of Asiatic cholera which swept the country in 1867 and 1868.

SNAKE BITES.—Guaco (*Mikania* sp.) is one of the various plants used as an antidote to the virulence of snake bites, not only by the Indians but by the Ladinos and Creoles as well. In order to neutralize the venom, the sukya also administers an infusion prepared from the bark and leaves of a leguminous shrub or small tree, called *daka*, while the *brum sirpi* weed is applied externally. The patient must abstain from eating food of which snakes are supposed to be fond. A woman *enciente* must under no condition be seen by the patient, otherwise the latter will die.

BUSH MEDICINES.—The Indians know a great number of bush medicines (M.: *sika;* T. and P.: *panbas, panabas;* U.: *dibasta*) for external or internal use. Many native plants and trees are employed, the bark, roots, leaves, and seeds being utilized. The white, delicious resin of the copal or incense tree (*Protium* sp.), copaiba balsa (*Copaifera officinalis* L.), Peru balsam (*Myrozylon pereirae* Klotzsch syn. *Toluifera pereirae* Baill.; M. and S.: *bakus*), the gum of the locust tree (*Hymenaea courbaril* L.; M.: *lâùa, laka;* S.: *tipi*), ipecacuanha (*Uragoga ipecacuanha* or *Polygala costaricensis*), sarsaparilla (*Smilax officinalis*), and unguents prepared from the oils extracted from the seeds of various trees are employed in the treatment of certain infections and sores.

The yellow milk of a small tree, known locally as "samboo gum" or "leche baría" (M.: *samu;* S.: *pûmaba*), is applied in poultices for rheumatism; it is also said to cure the *bulpis* skin disease, when the latter is still in its first stage.

The seeds of the piñon (*Jatropha curcas* L.; M. and S.: *pisik*) and the antidote bean (*Fevillea cordifolia* L.; M.: *mukula;* S.: *mula*) are administered as an emetic and as a purgative. The medicinal properties of the castor-oil plant (*Ricinus communis* L.; S.: *unapalan*), which grows wild on the river banks, are well known. De Candolle, however, believes this plant to be of Old World origin; curiously enough, the Miskito have no native name for it.

Toothache is cured with the milk of the cachito tree (*Tabernaemontana donnell-smithii* Rose; M.: *bukss mahôra;* S.: *wako*); the latter is also used for skin troubles.

An ill-smelling herb reaching about a foot in height and known as fit weed (*Eryngium* sp.; M. and S.: *kisdiri*) is used for snake bites and epileptic fits. The Ladinos call it "culantro" (coriander) and use it as a condiment, but it must not be confounded with the true coriander (*Coriandrum sativum* L.), which is cultivated sometimes in Central American gardens under the name "culantro de Castilla."

The roots of the cerrón cantil or baraja (M.: *sus sdika;* S.: *tata, daka, tisliñ*) enter into remedies for venereal diseases. The bitter-

1: Conzemius M-4, 5 (1921) 1932
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wood or hombre grande (S.: *wanabaka*) is said to be efficacious in case of snake bites. 278

The woody rootstock of the China root or cuculmeca, a sort of French brier (S.: *samalâi*, *wasalanaka*) is boiled in water and the decoction is used to clean the blood, and as a preventive against snake bites.

The small "beans" contained in the pod of the pissabed or frijolillo shrub (M.: *siñsiñnya*) are toasted, ground, and used as coffee on account of their diuretic properties; the root of this plant is employed in malarial fever.

The large round leaves of the cowfoot or Santa Maria bush (M.: *sikatara;* S.: *kalamata*) enter into poultices for a swelling of the flesh, while spider webs are applied to wounds in order to stop bleeding. Wild honey is also used in medicine.

PRESUMED CAUSE OF DISEASES.—The cure of the sick is practically always left to the sukya; the latter is generally a clever herbalist, and the treatment applied by him is often excellent, but the remedy in itself is considered of no avail unless certain rites are observed by the healer as well as by the patient. 756

According to these primitive people, indigenous diseases and accidents are always due to the agency of some evil spirit (M.: *lasa;* T., P.: *walasa;* U.: *nawal*) under whose power the sick person is supposed to be. The mischief-maker may send a snake or a jaguar to harm the intended victim, or cause a tree to fall upon him, or cause his canoe to upset, or bring about some other calamity and ill luck. Thus toothache is supposed to be caused by a worm (M.: *sûkri, sisi*) that has been sent by these evil powers to bore the tooth. People walking in their sleep are said to be possessed by demons. Epilepsy is also caused by the temporary possession of the individual by such evil spirits; hence fits are called by the Miskito *wlasa prukaya* "to be beaten by the devil." For the cure of this disease a decoction prepared from the *kisauri* herb is said to be very efficacious. 753

This evil influence may be counteracted through the agency of the sukya who manages to exorcise the spirit from the sick and then brings about a complete cure.

DIAGNOSIS.—Through the use of narcotics, especially the excessive use of tobacco, the sukya throws himself in a condition of wild ecstasy, and goes into trances and hypnotic states. During such an abnormal condition he is supposed to be in relation with friendly spirits whom he had invoked previously, and who reveal to him the source of the illness and the mode of cure. 756

HEALER'S INSIGNIA.—The insignia or kickshaws of a sukya during a cure are three or four black hardwood sticks with carved heads and several magic stones and dolls or manikins of white tunu cloth. Stone axes, which are regarded as thunderbolts, figure also among the

1: Conzemius M-4, 5 (1921) 1932
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to frighten that feline and drive it away, by shooting arrows at it, making great fires, and beating drums. The same belief is held by these Indians with regard to a solar eclipse (T., P.: *ma nawa kaswe;* U.: *ma nawa kasya* "the jaguar is eating the sun").[78]

The Miskito, however, do not share in this superstition; they call the lunar eclipse *kati ñi-skura alkan* "the moon has caught his mother-in-law," and the solar eclipse *yu ñi-skura alkan* "the sun has caught his mother-in-law."[79]

SNAKE CHARMING.—Snake charming is practiced on the Mosquito Coast by Negroes chiefly (native Africans especially), but some of the Miskito are also supposed to know this art. In order to remain invulnerable against the bite of any snake, these people are said to drink from time to time an infusion made by boiling the guaco weed (*Mikania* sp.) in water. The same effect may be obtained by applying a little juice from the latter plant into a small incision in the skin. The chewing of a few guaco leaves every day is also supposed to be an efficacious preventive against snake bites. The best snake charmers are said to eat the head of the reptile after having extracted the poisonous fangs; others merely cook their food with a little fat extracted over a slow fire from the head of a snake. The snake charmer must submit to restrictions in diet during certain periods of the year; he must also abstain from sexual intercourse with other women but his own, lest he might lose his powers.

In order to capture a poisonous snake without any danger to himself, the snake charmer chews a little bark from a certain shrub (M.: *pyuta sdika*) and then spits upon the head of the reptile. The latter is immediately stupefied and becomes absolutely harmless.

Many people are supposed to keep tame snakes in their houses or fields in order to guard their property. These reptiles act as watchdogs and will bite any intruder. The more ignorant Ladinos, who call such a snake "sontín" (from the English word "something," it appears), believe that this habit is practiced by almost all the Indians and Negroes of the Mosquito Coast.

CAMOTILLO POISON.—This is supposed to be a deadly poison with the aid of which the intended victim will die at a specified date, if everything has been prepared the right way. Even if the victim should know that camotillo has been administered to him he can not escape from a lingering death, for science knows of no way to counteract its effects.

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[78] The Cuna Indians of Panama believe that eclipses of the sun or of the moon are caused by a demon—half dog, half woman—which starts eating those heavenly bodies; these Indians drive the demon away by shooting at it with miniature arrows (E. Nordenskiöld, Comparative Ethnographical Studies, vol. F, pt. 2, Göteborg, 1920, p. 20).

[79] Sun and moon are considered masculine in the Miskito language.

1: Conzemius M-4, 5 (1921) 1932
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278 Camotillo is the Spanish name for a tuberous plant, said to be not unlike the sweetpotato vine. It is supposed to grow in a wild state in certain regions of the Mosquito Coast, in the neighborhood of the rivers, but it is known only to few persons. The tuber is dried in the sun and reduced to a fine powder by a very laborious process. After pulverization it is introduced into the food or drink of the intended victim. Death will set in after exactly as many days as the tuber in question had been extracted from the soil at the time of administration.

The Ladinos believe that many Miskito and Sumu are acquainted with this manner of disposing of an enemy, but I was unable to obtain from these Indians any reliable details pertaining to the plant. All my Indian informants denied knowing it. In 1919 the candidates for president and vice president of Honduras died several months previous to the election, and the ignorant people of that Republic ascribed their deaths to the administration of camotillo by adherents of the rival political party.

753 WITCH POISON.—Many Indians believe that poison can be wafted through the air to the intended victim. The fear of "buried poison" 754 has been introduced among the Miskito by Negroes from British Honduras and Jamaica, who have settled at the coast. In fact the Miskito of Rio Coco and Honduras nowadays ascribe disease not so much to the mischief of evil spirits as to the presence of buried poison in the neighborhood of the sick person's house. This poison is supposed to have been hidden there by one of his enemies with the object of causing him to fall into some lingering disease, as dysentery, and eventually to die. Such poison, which is generally inclosed in a bottle, is said to soak through the cork, spread to the surface, and then cause disease to all the people in the neighborhood.

755 When after the administration of different remedies there is no improvement in the condition of a sick person, a "poison doctor," that is, a sukya skilled in the discovery of such witch poison, is called. The latter, upon his arrival, takes a little walk around the house, and then pretends to smell buried poison in the neighborhood. He promises to take it out if everyone in the settlement will give him a small amount of money. As the presumed bad effects of such buried poison will gradually spread to the whole village, everyone will pay his share, and the following day the sorcerer promises to do the needful. In the meantime, generally during the night, he buries a small flask of a dark liquid near the house of the sick person. In the morning the entire population of the village is present in order to witness the extraction of the source of the illness. After searching the vicinity of the house for a considerable time the sukya finally walks to the spot where he buried the small bottle during the night, and then triumphantly shouts: *Nara sa* "Here it is." He shows the

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There are many ways practiced commonly by the obeah man to injure his own enemy or that of his client. He may send to the intended victim a "duppy" (evil spirit). Or he may work with buried "poison," that is to say, he buries in the vicinity of the house of his intended victim a package containing rags, feathers, bones, and the like, after which the latter will fall sick and eventually die. Again he may introduce poison in his food by means of a third person. The obeah man may attain the object in view, that is to set obeah on his enemy, by merely making a cross or some other mark on the house, canoe, or some tool of the latter, or by shaking hands with him. It is even claimed that some "strong" obeah men are able to direct poisonous snakes to the bed of the intended victim. Sometimes such a sorcerer brings about the desired effect, owing to the great credulity of the people, who are so afraid of him that they do not even dare to denounce him.

MARRIAGE AND SEXUAL LIFE

The Indian girl is sold by her parents for a gun or a head of cattle, but she is rarely forced to become the wife of a man whom she does not love. Before giving their daughter away in marriage the parents will satisfy themselves that the suitor is able to provide for his future wife and that he understands the manufacture of hunting and fishing implements.

COURTSHIP.—The efficacy of certain drugs or herbs in stimulating virility, exciting venery, and in conquering the heart of a person of the opposite sex is believed in by these Indians, and by many Ladinos and Creoles as well. By allowing a few drops of such a "love medicine" (M.: *yamni kâikaya sâika;* T.: *yamni talnin pananbas;* U.: *yamka talnaka dikabasta*) to fall on the clothes, handkerchief, head, or body of a person, the affection of the latter may be obtained. Other herbs used in a similar manner will produce the opposite effect; such an infusion (M.: *misbara kâikaya sâika;* T.: *ba talnin pananbas;* P.: *ma iwihni talanin pananibas;* U.: *di dutka talnaka dikabasta*) is used to separate lovers who will thenceforth have a profound repugnance toward each other. Certain old people are supposed to be able to prepare very efficacious remedies of this kind, which they will sell for as much as $5. Should, however, the secret of the preparation be communicated, the charge will be about five times higher. A preparation of the Spanish fly or blister beetle, of which two varieties exist, a small brown one and a larger one which is black with longitudinal yellow bars, is believed also by some to act as a love potion; others again say that it will produce craziness. In reality this insect is a poison, but may be used in medicine as a diuretic and vesicatory. The Ladinos believe that practically all the Indians and Creoles of

2: Kirchhoff E-4 (no date) 1948
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Maize is believed to be unimportant except in the higher lands, e.g., among the *Ulua*. The *Jicaque* grow it as a commercial crop but do not use it extensively as food. Pineapples are important to the *Paya*. Chili peppers and opuntia, the latter used for raising cochineal, a dye-producing insect, appear to be recent introductions. Plants introduced by the Europeans vary in importance, but plantain is now one of the most basic foods of the region. Quantities of wild foods of all kinds form an important part of the diet.

Hunting.—The bow and arrow was once important to many tribes but has been partially or wholly replaced by the gun. The bow has not been reported from the Corn Islands. Spears or javelins were formerly used for hunting. Slings, traps, and snares were used prinicipally for birds. For the blowgun, see page 224.

LIST OF FOODS GROWN BY THE PEOPLE IN THE CARIBBEAN LOWLANDS:

AMERICAN ORIGIN:

- Sweet manioc.
- Bitter manioc.
- Maize.
- Pejivalle (pejibaye) palm.
- Sweetpotato.
- Eddoe (tania).
- Gourd.
- Pumpkin.
- Squash.
- Chayote.
- Tomato.
- Bean (red and black).
- Pineapple.
- Tobacco.
- Cotton.
- Achiote (*Bixa orellana*).
- Cacao.
- Pataste.
- Papaya.
- Avocado.
- Guava.
- Chirimoya.
- Zapote.
- Coconut.
- Usi.
- Ficus.
- Yam.
- Opuntia.
- Peanuts.

FOREIGN ORIGIN:

- Rice.
- Sugarcane.
- Coffee.
- Mango.
- Breadfruit.
- Tamarind.
- Citrus fruits.
- Plantain.
- Banana.

Hunting is exclusively a male occupation. Communal hunts lasting several days and hunting by torchlight have been reported. Dogs are used frequently to chase the game. Hunters may imitate the calls of animals, sometimes using bone whistles.

Fishing.—Women fish with hooks, which were originally made of bone. Men fish in groups of varying sizes. Fish are shot with the bow and arrow, speared with single- or multipronged spears, taken with traps of various types, or frightened so that they jump into canoes. Torches are used at night to attract the fish. Fish are poisoned by parties of men. Women and men whose wives are pregnant or menstruating cannot join such expeditions (*Jicaque*). Rotenone-bearing plants are crushed in the water above a weir from which the stupefied fish are removed.

2: Kirchhoff E-4 (no date) 1948
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same way that manioc is planted. Some of the tribes recount a myth of a great flood. The *Jicaque* believe in two benevolent deities and a female god of evil. No offerings are made to the "good" deities, but attempts are made to placate the "evil" one, a female who is responsible for all misfortune and who causes death.

The *Sumo* and *Mosquito* and possibly the *Paya* believe that after death the soul makes its way eastward over a difficult route to a nether world of plenty and happiness. The description of the route traveled and the acts performed by the survivors of the deceased to aid the progress of his soul on this road differ from tribe to tribe. Under certain conditions the soul may remain about the house of the deceased and even occupy his former belongings, including domestic animals. For this reason these things must be destroyed.

The *Sumo*, *Mosquito*, and *Paya* believe that the world is populated with innumerable spirits. These haunt hills, caves, deep pools of water, and other places, and they are responsible for most misfortunes including sickness and death. A large part of the work of shamans is to placate these spirits, to drive them out of sick people, and otherwise to destroy them. Protection from the bad spirits is afforded by amulets and charms.

SHAMANISM

Most *Sumo* and *Mosquito* settlements have a shaman, who may take part in secular affairs but whose chief duty is to cure the sick. Shamans possess some spiritual power, but very little is known of the various rituals through which it is acquired. Sons and sometimes sons-in-law may succeed a shaman. Curing varies in detail according to the individual shaman and the spirits addressed. A shaman goes into a trance in which he contacts the spirits and, in one way or another, drives them out of the afflicted person. Curing rituals also include songs, dances, and the use of painted sticks, carved figures, and other paraphernalia. Some diseases are cured by the imposition of diets, the prohibition of sexual intercourse, and other restrictions. Complicated diseases or village-wide epidemics are isolated and receive special medical and ceremonial treatment. Infections, snake bites, and diseases such as malaria are cured by both shamans and laymen, the latter using infusions of herbs and a large number of native medicines. Steam baths followed by a cold plunge are also employed. Baths in hot springs and partial burial in hot sand are common practices, especially among the *Sumo*. When surgery is necessary a shaman employs knives made of obsidian, flint, bone, and such. Ashes, tobacco, wax, and resin are used as antiseptics.

A shaman may also prophesy the future or determine the route hunters should take in order to find game. By conjuring, a shaman may cause harm to come to people. A shaman may be retained by a person to eliminate an enemy.

3: Pijoan D-5 (ca. 1945) 1946
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of quarrel between two women. The fact remains that very little wrong-doing exists among the Miskito since once a wrongdoer is found out he loses the respect of his community and usually moves to another locality. It a debtor refuses to pay or refund an object or money borrowed, the creditor informes the village of this fact and he can go to the plantation of the debtor and pay himself in provisions without risk. Such pressure usually causes the debtor to make goods his debt.

In rare cases today poisoning is used to exterminate an enemy. This is accomplished by the use of poisonous extracts from plants, alligator gall, or cyanide stolen from the mines. If, however, an Indian shoots his enemy, he must likewise follow him to death. In certain cases, if an Indian has been insulted and cannot collect payment, he commits suicide, wherepon the offender must do the same. In most instances the threat in itself brings apology and payment. In general there is little crime among the Miskito.

The Indians show great reserve, are relatively silent, honest and generally reliable. Stinginess is considered the worst vice and foreigners who bestow gifts are known as good men. They are not quarrelsome. Recent contacts with foreigners has increased their shrewdness and they are less shy than they were years ago.

Members of the family address each other according to sex and relation, such as mother, father, daughter, brother, etc. Each has a name given for some peculiarity. Thus, an infant receives no name until some characteristic is noted.

The mentioning of a deceased person's name is taboo and is a direct insult to refer to the person in the presence of relatives. Husband and wife call each other *mayi*, my consort; before a child is born to them he calls her *kika*, girl, while she calls him *wahma*, young man. After a child is born they often call each other *luhpi yapti*, my child's mother, and *luhpi aisa*, my child's father. *Mahma* or *masa* are used to address a son or brother, whereas *kika* or *misis* refer to daughter or sister. Old men and women are called *dama*, grandfather, and *kaka*, grandmother. The common form of salutation is *naksa* and occasionally *nahki sma* (how are you?) The other replies *aiñwa sna* (I am well). When they take leave the expression is *aisabi* (we will speak again).

DWELLINGS

The villages *(tawan)* are located chiefly on the banks of waterways, rivers and lagoons. The reason for this may be twofold. First the waterways form the chief source of transportation by boat and secondly agriculture and wild fruits can be developed and secured near

3: Pijoan D-5 (ca. 1945) 1946
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759 rendering health service to this situation. Physicians, in general, find the territory unremunerative and as a consequence cannot be induced to venture or remain in that region. We are therefore confronted with the problem of adapting our method to the situation even though the procedure introduced may not be ideal.

For this reason Dr. Thaeler at Bilwas Karma has trained young men to act as agents for the central clinic. The men arrive at Bilwas Karma and undergo a serious series of lectures and demonstrations, then a period of internship and are forthwith prepared to carry out limited medical activities in the communities from whence they came. In this process of adaptation it is important that the trainee return to his original community, for his people know him, place trust in him, and adaption to a porgram is simplified. Furthermore the trainee is at ease with his own people, his prestige is increased and his relatives offer odequate security for his success.

164 759 The diseases in which an empirical diagnosis can be made with a medicum of success are as follows: malaria; yaws; pinta; acute dysentery (presumably bacillary); chronic weaking dysentery; (presumably protozoal or helminthic); helminthes; and skin infections. The trainee is taught mainly in terms of these major diseases, first aid and rudimentary principles of child-bearing and pediatrics are secondary. The system ordinarily employed by the Indians in first aid is not to be condemned, obstetrics and pediatrics do not constitute subjects of sufficient public health importance to this region. The trainee is taught insect control measures and the use of certain speciific drugs for the diseases just described. His medical supplies consist chiefly 278 of atabrine, oil of chenopodium, magnesium sulfate, sulfaquanidine, vioform, carbarsone, antiseptics, gentian violet pills, a few miscellaneous drugs such as aspirin and some first aid equipment. The trainee is taught to send many of the patients whom he regards as special cases to the hospital. There is a possibility that such a system may 000 succeed, particularily if the trainee or agent is brought back to Bilwas for refresher courses. The merits of the system result from one basic fact and that is that Dr. Thaeler is a well trained clinician with considerable understanding of these Indians. It seems highly important that such a program be directed only by a well qualified physician or physicians who have had special training in medicine as applied to societies of varying cultural traits. This fact has been recognised to some extent by the British in their various schools of tropical or colonial medicine and by the United Fruit Company. In other instances tropical medicine may be academically isolated from the societies who should receive the results. The mistakes made by young physicians,